

# THE PTERIDOPHYTES OF MISSISSIPPI

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In the past several years there has been a resurgence of interest in plant taxonomy and of botanical collecting in Mississippi. A number of botanists have made contributions which have increased our knowledge of the flora. In 1966 and 1967, the National Science Foundation supported our field work, and we were able to cover many areas of the state seldom visited by botanists. We have made approximately 40,000 collections of vascular plants, most of which have been identified. The objectives of this paper are to stimulate interest in the ferns and fern allies, to encourage collecting within the state in order to improve the known distributions, and to summarize our present information on the ferns and fern allies. We would like to thank all who have helped with this project and especially Dr. W. H. Wagner for his assistance and encouragement.

The flowering plants and ferns of Mississippi were listed by Lowe (1921). His list, although valuable, is both incomplete and sometimes inaccurate. For example, species were included from the lists of other authors without checking the specimens.

In this list, the species are based on specimens examined from GA, MISSA, and the University of Mississippi. Several species are listed by Wherry (1964) or Lowe (1921) as occurring in the state or as having a range which includes Mississippi, and these species should be looked for in our area. Some of these are: *Adiantum hispidulum* Swartz; *Dryopteris marginalis* Gray; *Lecanium membranaceum* Presl; *Isoetes melanopoda* Gay & Durieu; *Lycopodium cernuum* L.; *Marsilea mucronata* Braun; *M. uncinata* Braun; *Ophioglossum petiolatum* Hooker; *O. tenerum* Mettenius; *Psilotum nudum* Grisebach; *Pteris vittata* L.; *Selaginella arenicola* Underwood ssp. *acanthonota* Tryon; *Trichomanes radicans* Swartz.

Mississippi provides considerable diversity in climate, elevation, parent materials, and soils. Elevations range from around 800 feet above sea level in the extreme northeastern part to only a few feet above sea level along the Gulf Coast. The state is over 300 miles long in the north-south direction. This change in latitude, combined with the effects of the warm Gulf, causes climatic differences. In the extreme northeastern part of the state, one finds the southern flank of the Appalachian fold with limestones, shales and cherts of the carboniferous formation. The remainder of Mississippi is in the Gulf Coastal Plain with belts of varying parent materials or deposited soils. The physiographic regions of the state are shown in Fig. 1 and are based on those of Lowe (1921). They are: 1, Tennessee River Hills, TRH; 2, Northeastern Prairie Belt, NPB; 3, Pontotoc Ridge, PR; 4, Flatwoods, FW; 5,



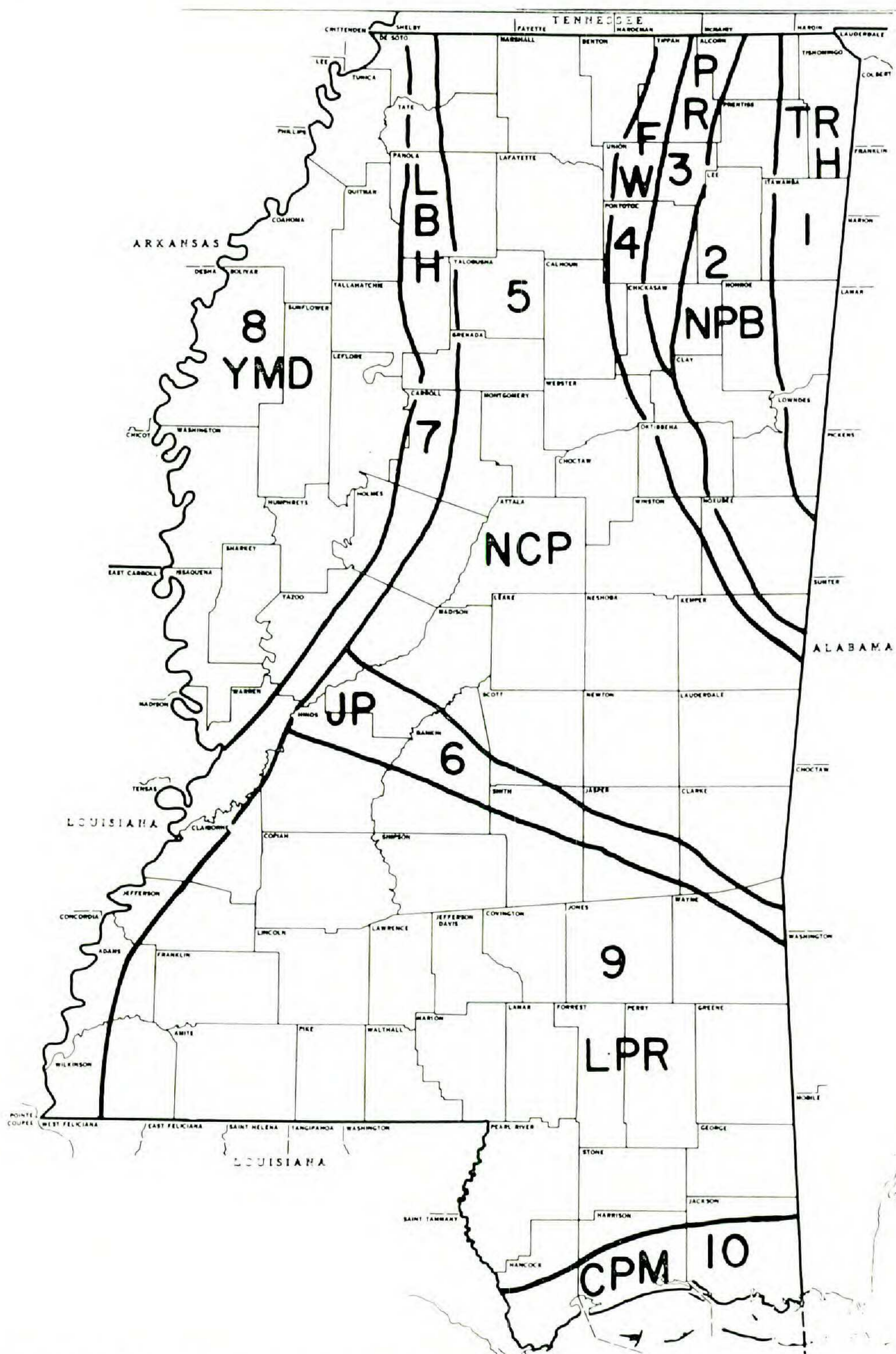


Fig. 1. The physiographic regions of Mississippi. 1, Tennessee River Hills, TRH; 2, Northeastern Prairie Belt, NPB; 3, Pontotoc Ridge, PR; 4, Flatwoods, FW; 5, North Central Plateau, NCP; 6, Jackson Prairie, JP; 7, Loess Bluff Hills, LBH; 8, Yazoo-Mississippi Delta, YMD; 9, Longleaf Pine Region, LPR; 10, Coastal Pine Meadows, CPM. The base map was used with permission of Rand McNally and Company. The regions are based on those of Lowe (1921).



North Central Plateau, NCP; 6, Jackson Prairie, JP; 7, Loess Bluff Hills, LBH; 8, Yazoo-Mississippi Delta, YMD; 9, Longleaf Pine Region, LPR; 10, Coastal Pine Meadows, CPM. The alluvial YMD is practically void of ferns. The greatest diversity of species is in the TRH in Tishomingo County. Distributional records indicate a need for additional field work in the middle one-third of the state. It is hoped that additions to the fern flora or new distributional records will be brought to our attention.

ALPHABETICAL LIST OF TAXA WITH DISTRIBUTIONS  
BY REGIONS AND COUNTIES:

*Adiantum capillus-veneris* L.

JP; Clarke, Wayne.

*Adiantum pedatum* L.

TRH, PR, NCP, LBH; Adams, Carroll, Chickasaw, Grenada, Holmes, Jefferson, Lafayette, Madison, Monroe, Pontotoc, Tallahatchie, Tate, Tishomingo, Warren, Wilkinson.

*Anchistea virginica* (L.) Presl

LPR, NCP, CPM; Forrest, Harrison, Jackson, Lamar, Lauderdale, Newton, Pearl River, Wayne.

*Asplenium pinnatifidum* Nutt.

TRH; Tishomingo.

*Asplenium platyneuron* (L.) Oakes ex D.C. Eaton

Throughout except YMD; Amite, Attala, Benton, Carroll, Chickasaw, Claiborne, Clarke, George, Grenada, Hinds, Holmes, Jackson, Jefferson, Jefferson Davis, Lafayette, Lauderdale, Lawrence, Lee, Lincoln, Marion, Marshall, Monroe, Montgomery, Noxubee, Panola, Perry, Pike, Tate, Tishomingo, Union, Warren, Wilkinson, Yalobusha, Yazoo.

*Asplenium trichomanes* L.

TRH; Tishomingo.

*Athyrium asplenioides* (Michx.) A. Eaton

Throughout except YMD; Attala, Benton, Calhoun, Clarke, Copiah, Covington, Forrest, Franklin, George, Holmes, Jackson, Jefferson Davis, Jones, Lafayette, Lamar, Lee, Lincoln, Madison, Marion, Marshall, Monroe, Oktibbeha, Panola, Perry, Pike, Pontotoc, Prentiss, Simpson, Smith, Stone, Walthall, Wayne, Winston.

*Athyrium pycnocarpon* Tidestrom

TRH; Tishomingo.

*Azolla caroliniana* Willd.

YMD, NPB, LPR; Bolivar, Noxubee, Pearl River.

*Botrychium alabamense* Maxon

LPR; George.

*Botrychium biternatum* (Sav.) Underwood

Scattered throughout except YMD; Covington, Jefferson Davis, Lafayette, Noxubee, Panola, Pike, Scott, Smith, Tishomingo.

*Botrychium dissectum* Spreng.

NCP, LPR; Franklin, Lafayette, Marshall.



- Botrychium virginianum* (L.) Swartz  
Scattered throughout except YMD; Alcorn, Benton, Calhoun, Carroll, Chickasaw, DeSoto, Forrest, Hinds, Lafayette, Lee, Monroe, Oktibbeha, Panola, Tate, Tippah, Tishomingo, Union, Warren, Wilkinson, Winston, Yalobusha.
- Camptosorus rhizophyllus* (L.) Link  
TRH, PR; Tishomingo, Union.
- Cheilanthes lanosa* (Michx.) D.C. Eaton  
TRH, NCP; Lafayette, Tishomingo.
- Cystopteris protrusa* (Weath.) Blasdell  
LBH; Adams, Jefferson, Tate, Warren, Wilkinson.
- Equisetum hyemale* L. var. *elatum* Morton  
Scattered throughout; Adams, Carroll, Clarke, Holmes, Tunica, Union.
- Lorinseria areolata* (L.) Presl  
Throughout except YMD, LBH; Attala, Calhoun, Choctaw, Clarke, Covington, Franklin, George, Harrison, Jackson, Jones, Lafayette, Lamar, Lauderdale, Lincoln, Marion, Marshall, Noxubee, Oktibbeha, Pearl River, Pike, Smith, Stone, Tishomingo, Walthall.
- Lycopodium appressum* (Chapm.) Lloyd & Underwood  
LPR, CPM, NCP; Forrest, Greene, Hancock, Lauderdale, Pearl River, Smith.
- Lycopodium alopecuroides* L.  
LPR, CPM, NCP; George, Hancock, Harrison, Jackson, Lauderdale, Marion, Pearl River, Smith, Stone.
- Lycopodium carolinianum* L.  
LPR, CPM; Greene, Stone.
- Lycopodium prostratum* Harper  
LPR, CPM; Forrest, Hancock, Lamar, Pearl River, Perry, Stone.
- Lygodium japonicum* (Thunb.) Swartz  
LPR, CPM, NCP, scattered in the southern one-third of the state; Amite, George, Jackson, Jefferson Davis, Lauderdale, Marion, Pearl River, Perry, Pike, Smith, Stone.
- Onoclea sensibilis* L.  
Throughout except YMD; Adams, Amite, Carroll, Copiah, Holmes, Lafayette, Lamar, Lauderdale, Lawrence, Marion, Marshall, Monroe, Noxubee, Perry, Pike, Simpson, Stone, Tate, Tishomingo, Wilkinson.
- Ophioglossum crotalophoroides* Walt.  
NCP; Lafayette.
- Ophioglossum engelmannii* Prantl  
NCP; Lafayette, Madison.
- Ophioglossum vulgatum* L. var. *pycnostichum* Fern.  
Scattered, NCP, TRH, LPR, YMD; Lafayette, Leflore, Marion, Monroe, Tate.
- Osmunda cinnamomea* L.  
LPR, CPM, PR, TRH, NCP; Calhoun, Forrest, George, Greene, Harrison,



Jackson, Jasper, Jefferson Davis, Lamar, Lauderdale, Lee, Marion, Monroe, Oktibbeha, Pearl River, Perry, Stone, Tippah, Walthall.

*Osmunda regalis* L. var. *spectabilis* (Willd.) Gray

LPR, CPM, NCP, PR, NPB; Calhoun, Clarke, Covington, Forrest, Franklin, George, Greene, Jackson, Jefferson Davis, Jones, Lafayette, Lamar, Lauderdale, Lee, Marion, Monroe, Pearl River, Perry, Pike, Prentiss, Scott, Stone, Tippah, Wayne.

*Polypodium polypodioides* (L.) Watt

Throughout except YMD; Attala, Benton, Carroll, Clarke, Greene, Jackson, Jefferson, Jones, Lafayette, Lauderdale, Lawrence, Lincoln, Marion, Marshall, Monroe, Montgomery, Noxubee, Oktibbeha, Panola, Perry, Smith, Stone, Tippah, Tishomingo, Union, Webster, Yalobusha.

*Polytichum acrostichoides* (Michx.) Schott

Throughout except YMD; Adams, Amite, Alcorn, Benton, Carroll, Calhoun, Chickasaw, Claiborne, Clarke, Forrest, Franklin, Jackson, Jefferson, Jones, Lafayette, Lamar, Lauderdale, Lee, Marion, Monroe, Panola, Perry, Pike, Pontotoc, Scott, Smith, Stone, Tallahatchie, Tate, Tippah, Tishomingo, Union, Walthall, Wilkinson, Yalobusha.

*Pteridium aquilinum* (L.) Kuhn var. *pseudocaudatum* Heller

Throughout except YMD and TRH; Adams, Benton, Calhoun, Carroll, Choctaw, Claiborne, Clarke, Copiah, Covington, Forrest, Franklin, Greene, Hancock, Harrison, Jackson, Jasper, Jefferson Davis, Jones, Lafayette, Lamar, Lawrence, Marion, Monroe, Noxubee, Panola, Pearl River, Perry, Scott, Smith, Walthall, Wayne, Yalobusha.

*Pteris multifida* Poir.

LBH; Hinds, Jefferson, Warren, Wilkinson.

*Selaginella apus* (L.) Spring.

TRH, NCP, LPR; Forrest, George, Lafayette, Perry, Stone, Tishomingo.

*Thelypteris dentata* (Forsk.) C. Chr.

LPR, NCP, LBH; Adams, Amite, George, Jackson, Lauderdale, Stone.

*Thelypteris hexagonoptera* (Michx.) Weatherby

Scattered throughout except YMD, NPB, JP; Adams, Benton, Carroll, Claiborne, Forrest, George, Jackson, Lafayette, Lauderdale, Lawrence, Marshall, Monroe, Panola, Perry, Pontotoc, Prentiss, Stone, Tallahatchie, Tate, Tishomingo, Warren, Webster, Wilkinson.

*Thelypteris normalis* (Christens.) Moxley

Southern one-half of the state; Claiborne, Copiah, George, Hancock, Harrison, Hinds, Jackson, Jefferson, Jones, Marion, Pearl River, Perry, Pike, Warren, Wayne, Wilkinson, Winston.

*Thelypteris noveboracensis* (L.) Nieuwl.

TRH; Itawamba, Tishomingo.

*Thelypteris palustris* Schott

LPR, CPM; George, Jackson, Jefferson Davis, Lamar, Pearl River, Marion, Smith, Wayne.



*Thelypteris torresiana* (Gaud.) Alston

LPR; Amite, Covington, Marion, Smith.

*Thelypteris* × *versicolor* R.P. St. John

Scattered in the southwestern part of the state; Adams, Marion, Wilkinson.

*Trichomanes petersii* Gray

One locality in LPR; Simpson.

*Woodsia obtusa* (Spreng.) Torr.

Scattered in LBH, TRH, NCP; Amite, Benton, Copiah, Hinds, Jefferson, Lafayette, Lowndes, Madison, Tishomingo.

#### REFERENCES

- LOWE, E. N. 1921. Plants of Mississippi. Miss. State Geol. Survey Bull. 17.  
WHERRY, E. T. 1964. The Southern Fern Guide. Doubleday and Co., Garden City, N.Y. 349 p.